

REMARKS

Applicants appreciate the Examiner's thorough review of the present application, and respectfully request reconsideration in light of the preceding amendments and the following remarks.

Claims 5 and 24-38 are pending in the application. Claims 5 and 24-26 remain unchanged notwithstanding the new grounds of rejection. New claims 27-38 readable on the elected invention/species have been added to provide Applicants with the scope of protection to which they are believed entitled. No new matter has been introduced through the foregoing amendments.

The copy of the PTO-1449 attached to the Office Action does not include the Examiner's initials placed adjacent to the citations, namely, JP 09-008403, JP 2002-368266, and JP 10-041586, which were submitted with the February 1, 2006 IDS with their respective English abstracts. Applicants respectfully request that the above listed references be considered and a copy of the PTO-1449, with the Examiner's initial(s) placed adjacent to the citation(s) on the PTO-1449, be returned to Applicants' representative in the next office communication.

The 35 U.S.C. 103(a) rejection of claims 5 and 24-26 as being obvious over *Chien* (U.S. Patent No. 6,492,661) in view of *Keizo* (JP 2001-339100) and *Ishida* (U.S. Patent Application Publication No. 20040209542) is traversed, because the applied references singly or in combination fail to disclose, teach or suggest all limitations of the rejected claims, especially, the limitation of independent claim 5 that "a first contact formed on and in direct contact with an upper surface of the first conductive GaN clad layer." An advantage of the claimed invention is that the ohmic contact property between the first clad layer and the first contact is enhanced.

The applied references, especially, *Chien*, fail to teach or suggest the claimed feature. In the *Chien* device, layer 151 that appears to be in direct contact with first contact 159 (FIG. 9e) is not a clad layer; it is a buffer layer. See *Chien* at column 7, line 10. Further, the actual clad layer of

Chien that is most relevant to the claimed clad layer, i.e., layer 152 (column 7, line 11), is not in direct contact with first contact 159. This deficiency of *Chien* is not deemed curable by any of the teaching references.

The prior art device of *Chien* is no more relevant than the previously applied and now withdrawn reference of *Miura*, because both references use a buffer layer (e.g., layer 151 of *Chien*) between the first contact (e.g., layer 159 of *Chien*) and the first clad layer (e.g., layer 152 of *Chien*). Such buffer layer greatly deteriorate the ohmic contact property between the first contact (159) and the first clad layer (152). This disadvantage is overcome by the feature of the claimed invention.

The above deficiency and disadvantage of *Chien* would be present in the Examiner's proposed combination with *Keizo* and *Ishida* which, if proper, would fail to teach or disclose all limitations of independent claim 5.

Accordingly, Applicants respectfully submit that independent claim 5 is patentable over the applied references.

Claims 24-38 depend from claim 5, and are considered patentable at least for the reason advanced with respect to claim 5. The dependent claims are also patentable on their own merits since these claims recite other features of the invention neither disclosed, taught nor suggested by the applied art.

As to claims 27-29, 33 and 37, the applied references, especially *Chien as applied by the Examiner*, do not fairly teach or suggest that the active layer is in direct contact with the lower surface of the first conductive GaN clad layer. According to the Examiner, *Chien* teaches a "clad layer" 151. However, such "clad layer" 151 is not in direct contact with the active layer 153 due to layer 152.

As to claims 28-31, the applied references, especially *Chien*, do not fairly teach or suggest

that the conductive adhesive layer is in direct contact with both the lower surface of said second conductive GaN clad layer, and the lower surface of the conductive adhesive layer. In other words, the LED of claims 28, 30 and 31 does not include a separate reflective layer between the adhesive layer and the second clad layer. This feature finds support in page 14, lines 8-11 of the specification as filed. *Chien* teaches away from the claimed invention because a reflective layer must be present in the reference's device. *See Chien* at column 3 line 57 through column 4, line 6, and column 4, line 59 through column 5, line 18. Thus, it would not have been obvious to modify *Chien* to arrive at the claimed invention.

As to claims 29, 34 and 38, the applied references, especially *Chien*, do not fairly teach or suggest that the second contact covers the entire lower surface of said conductive substrate. Note, for example, layer 158 in FIG. 9e of *Chien*.

As to claims 32-34 and 36, the applied references, especially *Chien*, do not fairly teach or suggest that the reflective layer is in direct contact with both the second conductive GaN clad layer and the conductive adhesive layer. In *Chien*, reflective layer 156 cannot be in direct contact with the second clad layer 154 due to the presence of the intervening layer 155.

As to claims 35-38, the applied references, especially *Chien*, do not fairly teach or suggest that the reflective layer extends continuously without interruption from one of said side surfaces to the opposite one of side surfaces. Note, for example, the gap at the center of reflective layer 156 of *Chien*. Such gap is necessary in the *Chien* device for the purpose of forming a current-block region and cannot be removed. *See Chien* at column 4, line 61, column 7, lines 30-34 and column 6, lines 32-34. With the gap at its center, reflective layer 156 of *Chien* does not extend continuously without interruption from one side surface to the opposite side surface, as presently claimed.

Each of the Examiner's rejections has been traversed. Accordingly, Applicants respectfully submit that all claims are now in condition for allowance. Early and favorable indication of

allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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